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## QUIZZES

### Practice Test-1 (Ecosystem and Evolution)



10 Questions



7 min

#### Topics

Food chain, Food web, energy flow, Succession, Symbiosis (Mutualism, Commensalism, Parasitism, Predation), Biogeochemical Cycle (N<sub>2</sub> Cycle), Human Impacts on Environment, Acid Rain, Greenhouse effect, Ozone depletion, Algal blooms

SAEED MDCAT TEAM



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Start Quiz



2/10



7 min



Hint

Q : An aquarium is a:



Biome



Community



An ecosystem



An ornamental item

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT



Q

1/10



7 min



Hint

Q : A plant eaten by herbivorous animal which is eaten by a carnivorous animal can be described as:

A

Food web

B

Food chain

C

Food pyramid

D

Food cycle

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

1

2

3

4

5

6

7



4/10



7 min



Hint

Q : Competition for light, nutrients and space is much even in a:



Population



Community



Biome



Forest

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT





3/10



7 min



Hint

Q : The stable community in ecological succession is:



Pioneer



Sere



Climax



Carnivores

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT



6/10



7 min



Hint

Q : Interactions between the biotic components and physical component refer to:



Ecology



Environmental biology



Ecosystem



Biosphere

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT



Q

5/10



7 min



Hint

Q : Nitrogen fixing ability is not found in:

A

Cyanobacteria

B

Autotrophic bacteria

C

Symbiotic bacteria

D

Nitrifying bacteria

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

1

2

3

4

5

6

7



7/10



7 min



Hint

Q : Rock - cancer is caused by:



Greenhouse effect



Acid rains



Noise



Lead pollution

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT





8/10



7 min



Hint

Q : Greenhouse effect refers to:



A Warming of earth



B Desertification



C Cooling of earth



D Increased rainfall and greenery

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT



9/10



7 min



Hint

Q : One molecule of CFC can decompose:



One molecule of ozone



2-5 molecules of ozone



5-10 molecules of ozone



Thousands of molecules of ozone

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

Q Algal blooms are result in

- ☐ A Global warming
- ☐ B Salinization
- ☒ C Eutrophication
- ☐ D Bio-magnification

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SAEED MDCAT TEAM

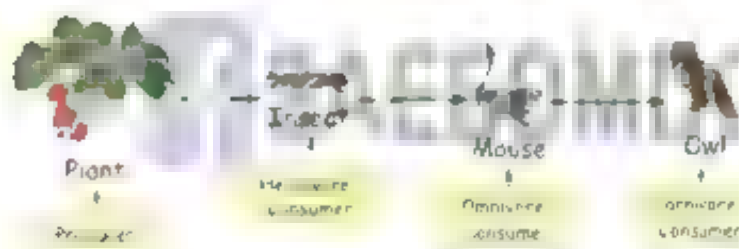
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Q A plant eaten by herbivorous animal which is eaten by a carnivorous animal can be described as

- ☐ A Food web
- ☒ B Food chain
- ☐ C Food pyramid
- ☐ D Food cycle

Expansion

SAEED MIDCAT TEAM







Correct! Great job!



Q An aquarium is a



Home



Community



An ecosystem



An ornamental item

### Explanation

An aquarium can be described as a closed artificial ecosystem in which fish and plants are able to find a habitat where they can grow and develop in a healthy and balanced way. Each aquarium must therefore be consciously designed, developed and managed to facilitate the establishment of the virtuous cycles that occur spontaneously in nature and give rise to the interactions



rec.

not a tea



cc



Q Competition for light, nutrients and space is much even in a



Populat on



Commun ty



Bome



Forest

Explanation

Ind viduals of a same population present at a same place have competition for ght, space, nutrients and space. It affects the size of population of that area



Record

Not Answered



Answered



Q The stable community in ecological succession is



Pioneer



Sere



Climax



Carnivores

Explanation

Climax community is more stable than all other successive communities like forest due to genetic diversity and diversity is different organisms



rec.

not selected



selected

Q Interactions between the biotic components and physical component refer to



Ecology



Environmental biology



Ecosystem



Biosphere

Explanation

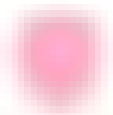
An ecosystem is a geographic area where plants, animals and other organisms as well as weather and landscape work together to form a bubble of life





Correct

Not a team



Q



Q Nitrogen fixing ability is not found in



Cyanobacteria



Autotrophic bacteria



Symbiotic bacteria



Nitrifying bacteria

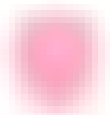
Explanation

Nitrifying bacteria are responsible for the oxidation of ammonia or ammonium ions to nitrate, this process is called nitrification



Correct

Not a team



Q

A

Q Rock cancer is caused by



Greenhouse effect



Acid rains



Noise



Lead pollution

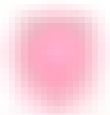
Explanation

Acid Rain causes extensive damage to buildings and stone structures which is known as stone/rock cancer



Recall

Not a test



Recall



Q Greenhouse effect refers to



Warming of earth



Desertification



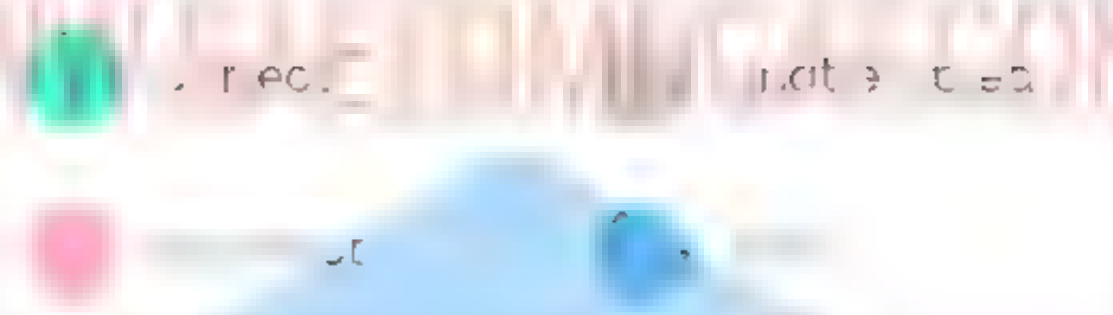
Cooling of earth



Increased rainfall and greenery

Explanation

The greenhouse effect is the process by which radiation from a planet's atmosphere warms the planet's surface.



Q One molecule of CFC can decompose

- ☐ One molecule of ozone
- ☐ 2-5 molecules of ozone
- ☐ 5-10 molecules of ozone

☒ Thousands of molecules of ozone

Explanation

CFC molecules are made up of chlorine, fluorine and carbon atoms  
One molecule of CFC can decompose thousands of ozone molecules  
by converting 1 to molecular oxygen





Recall

Not a test



Remember

Q Algal blooms are result in



Global warming



Sanitation



Eutrophication



Bio-magnification

Explanation

Eutrophication is a natural process of excessive enrichment of water with nutrients by which large amount of living organic matter grows in the water. Human activities accelerate eutrophication by adding mineral and organic nutrients in larger quantities than nature would provide as excreta and fertilizer.

QUIZZES

Practice Test 2 (Ecosystem and Evolution)

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Q Theory of catastrophism was presented by

- ☒ A Lyell
- ☐ B Malthus
- ☐ C Cuvier
- ☐ D Darwin

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Q Bacteria involved in evolution of flagella were

- ☐ A Cocci
- ☐ B Spirochete
- ☐ C Bac
- ☐ D Spirogyra

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Q Who developed a theory of natural selection essentially identical to Darwin's?

- ☐ A Hardy Weinberg
- ☐ B Malthus
- ☒ C Alfred Wallace
- ☐ D Lyell

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Q First comprehensive model that attempted to explain how life evolves was



Vent hypothesis



Theory of special creation



Theory of inheritance of acquired characters



Theory of natural selection

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Q First organism evolve in

- ☐ A Air
- ☐ B Land
- ☐ C Oceans
- ☐ D Ponds

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Q. Modifications an organism acquires during its life time, can be passed along to its offsprings called as

- ☐ A. Origin of species
- ☐ B. Inheritance of acquired characters
- ☐ C. Law of natural selection
- ☐ D. Principles of population

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Q - Theory of inheritance of acquired characters was presented by

☐ A Aristotle

☐ B Lamarck

☐ C Darwin

☐ D Wallace

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SAEED MDCAT TEAM

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Q Theory of use and disuse of organs is

- ☐ A Cuvier's theory
- ☐ B Lamarck's theory
- ☒ C Darwin's theory
- ☐ D Synthetic theory

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Q All of the following are related to evolution except

- ☐ A Change over time
- ☐ B Antibiotic resistance in bacteria
- ☐ C Muscle hypertrophy
- ☐ D Origin of new species

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Q The base of Lamarckism is

- ☐ A Selection
- ☐ B Effect of metabolism
- ☒ C Effect of environment
- ☐ D solation

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Recall

Not selected



Remember



Understand

Q Theory of catastrophism was presented by



Lyll



Malthus



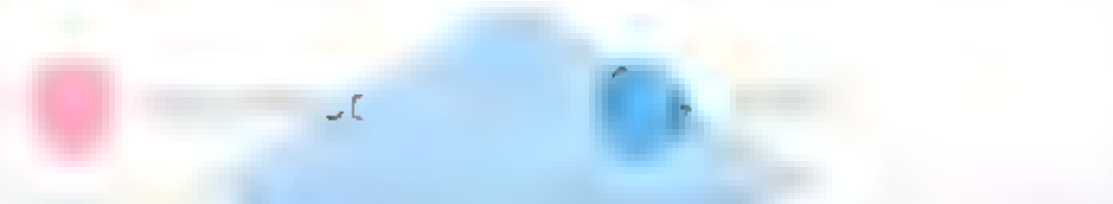
Cuvier



Darwin

Explanation

The Earth had largely been shaped by sudden, short-lived and violent events, possibly worldwide in scope



Q Bacteria involved in evolution of flagella were

- ☐ Cocci
- ☒ Spirochete
- ☐ Bac
- ☐ Spirogyra

### Explanation

To make flagella a prokaryotic amoeboid host cell engulfed spirochete bacteria and developed flagella on its body



Recall

Not selected



Incorrect



Q Who developed a theory of natural selection essentially identical to Darwin's?



Hardy Weinberg



Malthus



Alfred Wallace



Lyell

Explanation

He sent his theory of natural selection to Darwin.

Recall

Not selected

Question

Q First comprehensive model that attempted to explain how life evolves was



Vent hypothesis



Theory of special creation



Theory of inheritance of acquired characters



Theory of natural selection

Explanation

Lamarck gave the first idea about the evolution in his theory





rec.

not selected



selected

Q First organism evolve in



Air



Land



Oceans



Ponds

Explanation

According to hydrothermal vent hypothesis, prokaryotic life starts deep in ocean in **underwater hot springs** called **hydrothermal vents**

Recall

Not a test

Q

Q Theory of inheritance of acquired characters was presented by



Aristotle



Lamarck



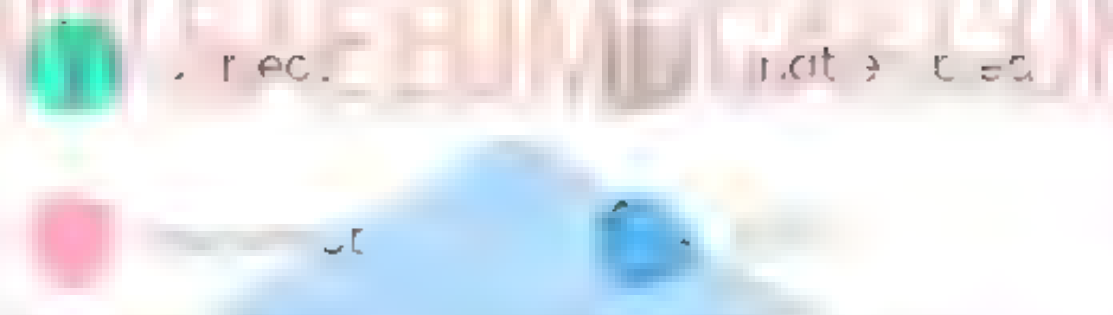
Darwin



Wallace

Explanation

Darwin and Wallace worked on theory of evolution by natural selection. Aristotle recognized that organisms ranged from relatively simple to very complex structures.



Q Modifications, an organism acquires during its life time, can be passed along to its offspring's called as

- ☐ Origin of species
- ☒ Inheritance of acquired characters
- ☐ Law of natural selection
- ☐ Principles of population

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Explanation  
SAEED MD CAT TEAM

According to Lamarckism organisms pass their acquired characters to the next generation as inheritance. This concept is not acceptable.



Correct

Not selected



Incorrect

Q The base of Lamarckism is



Selection



Effect of metabolism



Effect of environment



Isolation

Explanation

Lamarck stated that giraffe stretch their neck for browsing purpose to overcome shortage of grass.

Q Theory of use and disuse of organs is



Cuvier's theory



Lamarck's theory



Darwin's theory



Synthetic theory

### Explanation

Darwin and Wallace worked on theory of evolution by natural selection. Cuvier presented theory of catastrophism. The modern Synthetic theory of Evolution explains the evolution of life in terms of genetic changes occurring in the population that leads to the formation of new species.



Correct

Not selected



Incorrect

Q All of the following are related to evolution except



Change over time



Antibiotic resistance in bacteria



Muscle hypertrophy



Origin of new species

Explanation

Somatic changes due to environmental factors are not due to evolution



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## QUIZZES

Practice Test 3 (Ecosystem and  
Evolution)

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Q Which of these represent exact sequence of these events?

☐ A 3,2,4,1

☐ B 3,1,4,2

☐ C 4,2,1,3

☐ D 2,1,3,4

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SAEED MDCAT TEAM

SAEEDMDCAT

Q Two main points of Darwin's theory of evolution are

- ☐ A Origin of species, Descent with modification
- ☐ B Natural selection, adaptation
- ☐ C Struggle for existence evolution
- ☐ D Descent with modification, Natural selection & adaptation

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SAEED MDCAT TEAM

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Q Natural selection can operate on

- ☐ A Variations
- ☐ B Non-hereditary variations
- ☒ C Heritable variations
- ☐ D All A, B & C

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Q The most obvious visual evidence for evolution is



Fossil record



Biogeography



Comparative anatomy



Comparative embryology

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Q Scientist who first argued evolution with evidence was

☐ A Aristotle

☐ B Darwin

☐ C Linnaeus

☐ D Lamarck

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Q An important turning point for evolutionary theory was birth of



Cell biology



Modern genetics



Population ecology



Population genetics

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Q Which of the following is/are not analogous organs?

- ☐ A Wings of birds and octopus
- ☐ B Wings of birds and pectoral fins of fish
- ☒ C Wings of bat and butterfly
- ☐ D Legs of frog and cockroach

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for

Q The presence of gill slits in the embryos of vertebrates support the theory of



Metamorphosis



Organic evolution



Recapitulation



Biogenesis

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Zinn

110

Q All organisms share the same genetic code. This commonality is evidence that



Evolution is occurring now



Convergent evolution have occurred



All organisms have descended from a common ancestor



Evolution occurs gradually

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Q It is the study of evolutionary history of an organism

- ☐ A Ontogeny
- ☐ B Taxonomy
- ☒ C Phylogeny
- ☐ D Embryology

SAEED MDCAT

SAEED MDCAT TEAM

SAEEDMDCAT





rec.

not a c = 2



cc



Q Which of these represent exact sequence of these events?



3,2,4,1



3,1,4,2



4,2,1,3



2,1,3,4

Explanation

Overproduction in a population leads to the competition for limited resources intra-specifically as well as inter-specifically which leads to evolution through natural selection.



2

3

4

5

6

7

Incorrect



1/10

Q Natural selection can operate on



Variations



Non-hereditary variations



Heritable variations



All A, B, C

Explanation





Correct

Not selected



Q

A

Q An important turning point for evolutionary theory was birth of



Cell biology



Modern genetics



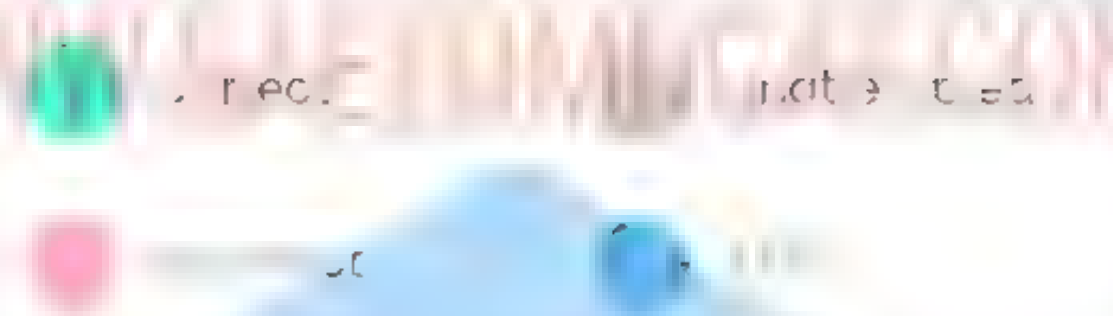
Population ecology



Population genetics

Explanation

Darwin's theory of evolution when collaborated with Mendelian genetics was a turning point and led to theory of Modern synthesis



Q Two main points of Darwin's theory of evolution are

- ☐ Origin of species Descent with modification
- ☐ Natural selection, adaptation
- ☐ Struggle for existence evolution

☒ Descent with modification, Natural selection & adaptation

Explanation

According to Darwin, changes occurring at a slow rate with slight changes results in evolution with time.





Record

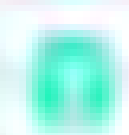
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Q



Q The most obvious visual evidence for evolution is



Fossil record



Biogeography



Comparative anatomy



Comparative embryology

Explanation

The record of the occurrence and evolution of living organisms through geological time as inferred from fossils

Record

Not attempted

00

Q Scientist who first argued evolution with evidence was



Aristotle



Darwin



Linnaeus



Lamarck

Explanation

Aristotle, Linnaeus and Lamarck presented vague ideas and philosophical logics of evolution without authentic proofs



Correct



Unattempted



Incorrect



7/10

Q : Which of the following is/are not analogous organs?



Wings of birds and locust



Wings of birds and pectoral fins of fish



Wings of bat and butterfly



Legs of frog and cockroach

Explanation

Analogous organs are the organs with same function but different structures. Wings of birds and pectoral fins of fishes have different functions, hence they are not analogous.



Correct



Unattempted



Incorrect



8/10

Q : The presence of gill slits in the embryos of vertebrates support the theory of:



Metamorphosis



Organic evolution



Recapitulation



Biogenesis

SAEED MDCAT

SAEED MDCAT TEAM

Explanation



SAEEDMDCAT

The development of an organism (ontogeny) expresses all the intermediate forms of its ancestors throughout evolution.



Correct



Unattempted



Incorrect



10/10

Q : All organisms share the same genetic code. This commonality is evidence that:



Evolution is occurring now



Convergent evolution have occurred

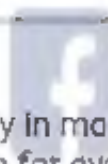


All organisms have descended from a common ancestor



Evolution occurs gradually

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SAEEDMDCAT

Similarity in molecular make up of organisms is a very strong evidence for evolution.





Correct



Unattempted



Incorrect



9/10

Q : It is the study of evolutionary history of an organism:



Ontogeny



Taxonomy



Phylogeny



Embryology

Explanation

Phylogeny is the history of the evolution of a species or group.